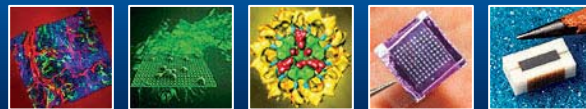


Fact Sheet

National Institute of Biomedical Imaging and Bioengineering

DIVISION OF INTERDISCIPLINARY TRAINING



NIBIB CONTACT

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Introduction

The National Institute of Biomedical Imaging and Bioengineering leads the development and application of emerging and breakthrough biomedical technologies based in the physical and engineering sciences. This research agenda will dramatically advance the Nation's healthcare by improving the detection, management, understanding and, ultimately, the prevention of disease.

Training a new cadre of interdisciplinary researchers is an important component of the Institute's mission. Through training workshops and conferences, the NIBIB solicited input from extramural and intramural scientific communities regarding important needs and issues to be considered in the development of future training initiatives.

In an effort to draw bright, young, talented researchers into the activities of the Institute, NIBIB is developing new training programs in the biomedical imaging and bioengineering fields. The Institute's proactive approach is to develop creative and flexible opportunities that will fill critical gaps in the career continuum, while also enhancing the participation of under-represented populations.

National Research Service Awards (NRSA)

NRSA support provides a stipend to pre-doctoral students while they work toward their research degrees or to postdoctoral fellows while they obtain additional research experience in a mentor's laboratory.

- **T32 – Institutional Training Grants** are awarded to institutions with strong research programs to support a designated number of pre- and/or postdoctoral fellows.
- **F31 – Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellows** provide up to five years of support for research training leading to the Ph.D. or equivalent. The focus of this program is on doctoral students who have passed their qualifying (or equivalent) exams.
- **F31 – Individual Predoctoral Fellowships for Minority Students and for Students with Disabilities** provide up to five years of support for research training leading to the Ph.D. or equivalent.
- **F32 – Individual Postdoctoral Fellowships** provide up to three years of postdoctoral training support for qualified individuals who have received a Ph.D., M.D., or equivalent degree.
- **F33 – Individual Senior Fellowships** provide the opportunity for experienced scientists to make major changes in the direction of their research careers, to broaden their research capabilities, or to enlarge their command of an allied research field.

Career Development Awards

Career development awards provide salary and laboratory support for individuals who have completed their postdoctoral training, or who need protected time to perform research during critical periods of their careers.

- **K01 – Mentored Research Scientist Development Awards** provide Ph.D. or other comparable researchers with support for three to five years of mentored research experience in order to transition into independence.
- **K08 – Mentored Clinical Scientist Development Awards** provide clinician scientists with support for three to five years of mentored research experience to pursue research careers.
- **K23 – Mentored Patient-Oriented Research Career Development Awards** provide clinically trained professionals with support for three to five years of mentored research experience to pursue patient-oriented research careers.
- **K24 – Midcareer Investigator Awards in Patient-Oriented Research** provide support for established investigators who are actively engaged in patient-oriented research and who serve as mentors for new clinical investigators.
- **K25 – Mentored Quantitative Research Career Development Awards** provide three to five years of support for a mentored research experience. This program targets individuals with quantitative scientific and engineering backgrounds with little to no experience in biology or medicine who wish to focus their research on basic or clinical behavioral and biomedical research.

Research Supplements

- **Research Supplements to Promote Clinical Resident Research Experiences** are supplemental awards to an existing NIBIB grant. They are designed to attract outstanding clinicians into research careers related to the mission of the NIBIB by providing a one to two-year research opportunity during residency training.
- **Research Supplements to Promote Diversity in Health-Related Research** are supplemental awards to an existing NIBIB grant. They are designed to attract individuals from underrepresented groups to biomedical science. Candidates include individuals from underrepresented racial and ethnic groups, individuals with disabilities, and individuals from disadvantaged backgrounds. *Eligibility extends from the high school level to established research faculty.*
- **Research Supplements for Career Re-Entry** are designed to encourage talented individuals with high potential to re-enter an active research career after time off to attend to family responsibilities.

Other Training Opportunities

- **HHMI-NIBIB Interfaces Initiative for Interdisciplinary Graduate Research Training** is a partnership between the NIBIB and the Howard Hughes Medical Institute. The goal of this program is to train a cadre of Ph.D. scientists who possess the knowledge and skills to conduct interdisciplinary research at the interface between the biological and physical sciences. Phase I, funded by HHMI, supports the establishment of new interdisciplinary training programs. Phase II, funded by NIBIB, will sustain the training programs through their critical early years.
- **NIH-NSF Bioengineering and Bioinformatics Summer Institutes Program (BBSI)** was developed to attract individuals to careers in bioengineering and bioinformatics. The 10-week program is targeted to junior and senior undergraduates and early graduate students, and provides them with interdisciplinary bioengineering or bioinformatics research and education experiences.
- **NIH-NIST Joint Postdoctoral Program** is a partnership between NIH and NIST to support postdoctoral fellowships. The goal is to cultivate a scientific work force competent in both the biological and the physical sciences. Each Postdoctoral Associate has two Advisors, one at the NIH and one at NIST, and is expected to spend time at both NIH and NIST laboratories during the course of the two-year award.
- **Biomedical Engineering Summer Internship Program (BESIP)** is a partnership between NIH and the NIH Foundation. This 10-week summer program provides undergraduate biomedical engineering students an opportunity to participate, under the mentorship of world class scientists, in cutting-edge biomedical research projects at NIH laboratories.

NIH Blueprint Opportunities

The Blueprint is a framework to enhance cooperative activities among NIBIB and fourteen other NIH Institutes

that support research on the nervous system. Initiatives in the training arena include:

- **Cross-Institute Neuroscience Training** - This initiative provides interdisciplinary training in neuroimaging and computational neurobiology. Related initiatives will create training programs that span basic and clinical science departments, encouraging physicians and scientists to work together in tackling clinical problems.
- **Neurobiology Course Development** - This funding opportunity supports the development of courses on the neurobiology of diseases that affect the nervous system, emphasizing common themes across diseases and addressing both the pathology of these diseases and their basic science underpinnings. Additional information on NIH Blueprint initiatives can be found at <http://neuroscienceblueprint.nih.gov>.

NIH Roadmap Opportunities

The NIH Roadmap is a series of far-reaching initiatives focused on three main areas: new pathways to discovery, research teams of the future, and re-engineering the clinical research enterprise. Initiatives in the training arena include:

- Meetings and networks for methodological development in interdisciplinary research
- Training and short programs for inter-disciplinary research training
- Curriculum development award in inter-disciplinary research
- Multidisciplinary clinical research career development programs

Additional information on NIH Roadmap initiatives can be found at <http://nihroadmap.nih.gov>.

NIBIB Contacts

Please contact NIBIB program staff with your questions about training awards or the application process. We welcome the opportunity to speak with potential applicants to the Institute's training programs.

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